

CLAIMS

1. A dementia inspection apparatus comprising: an answer obtaining section; and a dementia degree inspecting section,

wherein the answer obtaining section obtains answers from a subject made within a predetermined answer time limit to each of a first examination chart and a second examination chart, the first examination chart has inspection sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct or error, the second examination chart has a combination of plural questions concerning contents of the inspection sentences and plural answers which are prepared for each question and one of which is to be selected, and

the dementia degree inspection section determines a dementia degree representing a degree of dementia of the subject based on the answers obtained by the answer obtaining section.

2. The dementia inspection apparatus according to claim 1, further comprising a first examination chart forming section, wherein the first examination chart forming section has plural kinds of inspection sentences tinted with colors in different coloring manners and selects one kind of inspection sentences

from the plural kinds of inspection sentences as inspection sentences of the first examination chart, thereby forming the first examination chart.

3. The dementia inspection apparatus according to claim 1, further comprising a second examination chart forming section, wherein the second examination chart forming section has plural kinds of question units each comprising a combination of a question concerning a story represented by the inspection sentences and plural answers which are prepared for the question and which are to be selected, a predetermined number of question units are selected from the plural kinds of question units, thereby forming the second examination chart.

4. The dementia inspection apparatus according to claim 3, wherein

the plural kinds of question units are associated with positions in the inspection sentences,

the dementia inspection apparatus further comprises a sentence range detecting section which detects a range of the inspection sentences which a subject was able to read within a predetermined answer time limit with respect to the first examination chart,

the second examination chart forming section selects a question unit associated with a position in the range detected by the sentence range detecting section in the inspection sentence, thereby forming the second examination chart.

5. The dementia inspection apparatus according to claim 1, wherein color words in the character group of the inspection sentences are tinted with plural colors such that individual color word has characters of the same color, characters in the character group except the color words are tinted with a single color.

6. The dementia inspection apparatus according to claim 1, wherein in the inspection sentences, character strings divided by specific kind of characters are tinted with colors different from each other.

7. The dementia inspection apparatus according to claim 1, further comprising:

 a chart display section which displays the first examination chart and the second examination chart;

 a start instructing section which instructs the subject to start inputting answers to the first examination chart and the second examination chart; and

 an answer time control section which prohibits the subject from inputting answer when time elapsed after the start instructing section instructed to start inputting answer to the first examination chart reaches a predetermined answer time limit in accordance with the first examination chart, and which prohibits the subject from inputting answer when time elapsed after the start instructing section instructed to start inputting

answer to the second examination chart reaches a predetermined answer time limit in accordance with the second examination chart.

8. The dementia inspection apparatus according to claim 1, further comprising a result display section which displays a dementia degree inspection result obtained by the dementia degree inspecting section.

9. The dementia inspection apparatus according to claim 1, further comprising an inspection receiving permission judging section which permits or prohibits a request for inspection of an inspection wisher in accordance with whether or not a predetermined period of time is elapsed after the inspection wisher received inspection last time.

10. The dementia inspection apparatus according to claim 1, further comprising a dementia degree storing section which stores correspondence between answers and dementia degree with respect to both the first examination chart and second examination chart, wherein

the dementia degree inspecting section refers to the dementia degree storing section, and determines a dementia degree of the subject from answers to both the first examination chart and second examination chart of the current subject obtained by the answer obtaining section.

11. The dementia inspection apparatus according to claim 10, wherein from the answers to the first examination chart obtained by the answer obtaining section, the dementia degree inspecting section extracts a number of correct answers as to whether color of characters constituting the color word is the same color as that represented by the color word, a number of error answers erroneously determined, a number of oversights of color words, and a number of erroneous recognition of characters other than the color words, and extracts a number of correct meaning grasps with respect to plural questions concerning a story described by the inspection sentences from answers to the second examination chart obtained by the answer obtaining section, and compares these extracted numbers with predetermined reference values with respect to these numbers, thereby determining the dementia degree,

the dementia degree storing section stores the predetermined reference values.

12. The dementia inspection apparatus according to claim 11, wherein in plural alternatives which are prepared as answers to the questions and one of which is to be selected, the second examination chart includes alternatives for informing that the subject does not know correct answer,

the dementia degree inspecting section further extracts a number of unclear answers showing how many alternatives for informing that the subject does not know correct answer the subject selected from answers to the second examination chart

obtained by the answer obtaining section, and determines the dementia degree based on the number of unclear answers, the number of correct answers, the number of error answers, the number of oversights, the number of erroneous recognition, and the number of meaning grasps.

13. The dementia inspection apparatus according to claim 1, further comprising a pre-test executing section which carries out a pre-test including a pre-test first examination chart and a pre-test second examination chart before the dementia degree is determined using the first examination chart and the second examination chart, the pre-test first examination chart includes pre-test sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of the characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct or error, the pre-test second examination chart has a combination of plural questions concerning contents of the pre-test sentences and plural answers which are prepared for each question and one of which is to be selected,

wherein the answer obtaining section obtains answers of the subject made within predetermined answer time limits to both the pre-test first examination and the pre-test second

examination chart, and

wherein the dementia degree inspecting section determines the dementia degree which represents a degree of dementia of the subject based on the answers to the pre-test first examination chart and the pre-test second examination chart.

14. A dementia inspection server in a dementia inspection system comprising the dementia inspection server and a dementia inspection client connected to each other through a line of communication, the dementia inspection server comprising:

a chart storing section which stores a first examination chart and a second examination chart, the first examination chart having inspection sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct or error, the second examination chart having a combination of plural questions concerning contents of the inspection sentences and plural answers which are prepared for each question and one of which is to be selected;

a chart sending section which sends the first examination chart and the second examination chart to the dementia inspection client;

an answer receiving section which receives answers to the first examination chart and the second examination chart from the dementia inspection client; and

a dementia degree inspecting section which examines a dementia degree representing a degree of dementia of a subject based on the answers obtained by the answer receiving section.

15. The dementia inspection server according to claim 14, further comprising a first examination chart forming section, wherein the first examination chart forming section has plural kinds of inspection sentences tinted with colors in different coloring manners and selects one kind of inspection sentences from the plural kinds of inspection sentences as inspection sentences of the first examination chart, thereby forming the first examination chart.

16. The dementia inspection server according to claim 14, further comprising a second examination chart forming section, wherein the second examination chart forming section has plural kinds of question units each comprising a combination of a question concerning a story represented by the inspection sentences and plural answers which are prepared for the question and which are to be selected, a predetermined number of question units are selected from the plural kinds of question units, thereby forming the second examination chart.

17. The dementia inspection server according to claim

16, wherein the dementia inspection client detects a range in the inspection sentences which the subject was able to read within a predetermined answer time limit with respect to the first examination chart,

the plural kinds of question units are associated with positions in the inspection sentences, and

the second examination chart forming section selects a question unit associated with a position in the range detected by the dementia inspection client in the inspection sentence, thereby forming the second examination chart.

18. The dementia inspection server according to claim 14, wherein color words in the character group of the inspection sentences are tinted with plural colors such that individual color word has characters of the same color, characters in the character group except the color words are tinted with a single color.

19. The dementia inspection server according to claim 14, wherein in the inspection sentences, character strings divided by specific kind of characters are tinted with colors different from each other.

20. The dementia inspection server according to claim 14, further comprising a dementia degree storing section which stores correspondence between answers and dementia degree with respect to both the first examination chart and second

examination chart,

wherein the dementia degree inspecting section refers to the dementia degree storing section, and determines a dementia degree of the subject from answers to both the first examination chart and second examination chart of the current subject obtained by the answer obtaining section.

21. The dementia inspection server according to claim 14, wherein from the answers to the first examination chart obtained by the answer obtaining section, the dementia degree inspecting section extracts a number of correct answers as to whether color of characters constituting the color word is the same color as that represented by the color word, a number of error answers erroneously determined, a number of oversights of color words, and a number of erroneous recognition of characters other than the color words, and extracts a number of correct meaning grasps with respect to plural questions concerning a story described by the inspection sentences from answers to the second examination chart obtained by the answer obtaining section, and compares these extracted numbers with predetermined reference values with respect to these numbers, thereby determining the dementia degree, and

the dementia degree storing section stores the predetermined reference values.

22. The dementia inspection server according to claim 21, wherein in plural alternatives which are prepared as answers

to the questions and one of which is to be selected, the second examination chart includes alternatives for informing that the subject does not know correct answer,

the dementia degree inspecting section further extracts a number of unclear answers showing how many alternatives for informing that the subject does not know correct answer the subject selected from answers to the second examination chart obtained by the answer obtaining section, and determines the dementia degree based on the number of unclear answers, the number of correct answers, the number of error answers, the number of oversights, the number of erroneous recognition, and the number of meaning grasps.

23. The dementia inspection server according to claim 14, wherein the chart storing section includes a pre-test executing section which carries out a pre-test including a pre-test first examination chart and a pre-test second examination chart before the dementia degree is determined using the first examination chart and the second examination chart, the pre-test first examination chart includes pre-test sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of the characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct

or error, the pre-test second examination chart has a combination of plural questions concerning contents of the pre-test sentences and plural answers which are prepared for each question and one of which is to be selected, and

the chart sending section sends the pre-test first examination chart and the pre-test second examination chart together with the first examination chart and the second examination chart to the dementia inspection client.

24. The dementia inspection server according to claim 14, further comprising a result sending section which sends a dementia degree inspection result obtained by the dementia degree inspecting section to the dementia inspection client.

25. The dementia inspection server according to claim 14, further comprising an inspection receiving permission judging section which permits or prohibits a request for inspection of an inspection wisher in accordance with whether or not a predetermined period of time is elapsed after the inspection wisher received inspection last time.

26. A dementia inspection client in a dementia inspection system comprising a dementia inspection server and the dementia inspection client connected to each other through a line of communication, wherein the dementia inspection client comprises:

a chart receiving section which receives, from the dementia

inspection server, a first examination chart and a second examination chart, the first examination chart having inspection sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct or error, the second examination chart having a combination of plural questions concerning contents of the inspection sentences and plural answers which are prepared for each question and one of which is to be selected;

a chart display section which displays the first examination chart and the second examination chart received by the chart receiving section;

an answer obtaining section which obtains answers made within predetermined answer time limits for the first examination chart and the second examination chart displayed on the chart display section in accordance with operation; and

an answer sending section which sends the answers obtained by the answer obtaining section to the dementia inspection server.

27. The dementia inspection client according to claim 26, further comprising a sentence range detecting section which detects a range in the inspection sentences which the subject

was able to read within a predetermined answer time limit with respect to the first examination chart.

28. The dementia inspection client according to claim 26, further comprising a result receiving section that receives a dementia degree inspection result, which is obtained by the dementia inspection server based on the answers from the dementia inspection client and sent from the dementia inspection server, and

a result display section which displays the dementia degree inspection result received by the result receiving section.

29. The dementia inspection client according to claim 26, further comprising a start instructing section which instructs the subject to start inputting answers to the first examination chart and the second examination chart, and

an answer time control section which prohibits the subject from inputting answer when time elapsed after the start instructing section instructed to start inputting answer to the first examination chart reaches a predetermined answer time limit in accordance with the first examination chart, and which prohibits the subject from inputting answer when time elapsed after the start instructing section instructed to start inputting answer to the second examination chart reaches a predetermined answer time limit in accordance with the second examination chart.

30. The dementia inspection client according to claim 26, wherein the dementia inspection server sends to the dementia inspection client a pre-test including a pre-test first examination chart and a pre-test second examination chart, the pre-test first examination chart includes pre-test sentences in which a character group constituting a story including color words each representing color is tinted with plural colors such that individual color word has characters of the same color, requires a determination as to whether a color of the characters constituting the color word is the same color as color represented by the color word, and requires an answer in a style capable of objectively determining whether the determination is correct or error, the pre-test second examination chart has a combination of plural questions concerning contents of the pre-test sentences and plural answers which are prepared for each question and one of which is to be selected, and

wherein the dementia inspection client further comprises a pre-test executing section which carries out the pre-test first examination and the pre-test second examination chart before obtaining answers of the subject to the first examination chart and the second examination chart, and the dementia inspection client obtains through the answer obtaining section answers of the subject made within predetermined answer time limits to both the pre-test first examination and the pre-test second examination chart and sends the obtained answers to the dementia inspection server.

31. A dementia inspection system comprising a dementia inspection server and a dementia inspection client connected to each other through a line of communication, wherein

the dementia inspection server comprises a first examination chart forming section, the first examination chart forming section has plural kinds of inspection sentences tinted with colors in different coloring manners and selects one kind of inspection sentences from the plural kinds of inspection sentences as inspection sentences of the first examination chart, thereby forming the first examination chart,

the dementia inspection server further comprises a second examination chart forming section, the second examination chart forming section has plural kinds of question units each comprising a combination of a question concerning a story represented by the inspection sentences and plural answers which are prepared for the question and which are to be selected, a predetermined number of question units are selected from the plural kinds of question units, thereby forming the second examination chart,

a chart sending section which sends the first examination chart and the second examination chart to the dementia inspection client,

an answer receiving section which receives answers made within predetermined answer time limits to both the first examination chart and second examination chart from the dementia inspection client, and

a dementia degree inspecting section which determines a

dementia degree representing a degree of dementia of the subject based on the answers obtained by the answer receiving section,

the dementia inspection client comprises a chart receiving section which receives the first examination chart and the second examination chart sent from the dementia inspection server,

a chart display section which displays the first examination chart and the second examination chart received by the chart receiving section,

an answer obtaining section which obtains answers made within predetermined answer time limits for the first examination chart and the second examination chart displayed on the chart display section in accordance with operation, and

an answer sending section which sends the answers obtained by the answer obtaining section to the dementia inspection server.